

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of inspecting an insulator to detect defects, said insulator having an aperture formed therein, the method comprising:
 placing said insulator inside a pressure-proof chamber, with a first electrode disposed within said aperture of said insulator and with a second electrode disposed at the exterior of said insulator,
 filling said pressure-proof chamber with air under a pressure which is higher than atmospheric pressure,
 establishing a potential difference between said first electrode and second electrode, and measuring a level of leakage current which flows between said first and second electrodes, and
 judging whether said leakage current exceeds a predetermined value, to thereby judge whether or not said insulator is defective.

2. (Original) A method of insulator defect inspection applied to an insulator, said insulator having an aperture formed therein, the method comprising
 disposing a first electrode within said aperture of said insulator with said insulator inserted into a cavity formed in a second electrode, said second electrode being formed of metal plate,
 establishing a potential difference between said first and second electrodes and measuring a level of leakage current which flows between said first and second electrodes, and
 judging whether there is a defect in said insulator, based upon whether or not said level of leakage current exceeds a predetermined value.

3. (Original) A method of insulator defect inspection, said insulator having an aperture formed therein, the method comprising

disposing a first electrode within said aperture of said insulator and disposing a second electrode such as to peripherally enclose said insulator,

establishing a potential difference between said first and second electrodes and measuring a level of leakage current which flows between said first and second electrodes, and

judging whether there is a defect in said insulator, based upon whether or not said level of leakage current exceeds a predetermined value.

4. (Original) A method of insulator defect inspection according to claim 1, wherein said insulator comprises a plurality of insulators having respective apertures formed therein and said first electrode comprises a plurality of first electrodes corresponding to respective ones of said plurality of insulators, wherein said potential difference is established between said second electrode and each of said plurality of first electrodes, and wherein it is judged that there is a defect in at least one of said plurality of insulators when said leakage current exceeds said predetermined value.

5. (Original) A method of insulator defect inspection comprising:
performing concurrent batch defect inspection of a plurality of insulators which have respective apertures formed therein, by

disposing each of a plurality of first electrodes in an aperture of a corresponding one of said plurality of insulators, and disposing a second electrode such as to enclose respective peripheries of said plurality of insulators, with said plurality of first electrodes, said plurality of insulators and said second electrode being enclosed within a pressure-proof chamber,

filling said pressure-proof chamber with air under a pressure which is higher than atmospheric pressure,

establishing a potential difference between each of said plurality of first electrodes and said second electrodes, and measuring a level of leakage current which flows between said plurality of first electrodes and said second electrodes,

judging that there is a defect in at least one of said plurality of insulators, when said leakage current exceeds a first predetermined value, and

when it is found that there is a defect, performing an individual unit sorting inspection of each of said plurality of insulators by

disposing a first electrode in said aperture of said each insulator, with a second electrode disposed to enclose a periphery of said each insulator,

establishing a potential difference between said first electrode and second electrode and measuring a level of leakage current which flows between said first and second electrodes, and

judging that there is a defect in said each insulator, when said level of leakage current exceeds a second predetermined value.

6. (Original) A method of insulator defect inspection according to claim 5, comprising

upon completion of processing all of said plurality of insulators by said individual unit sorting inspection, selecting each of said plurality of insulators that have been found to be free from defect by said individual unit sorting inspection, and applying said concurrent batch defect inspection to all of said selected insulators.

7. (Currently amended) ~~A method of insulator defect inspection according to claim 1~~ inspecting an insulator to detect defects, said insulator having an aperture formed therein, the method comprising:

placing said insulator inside a pressure-proof chamber, with a first electrode disposed within said aperture of said insulator and with a second electrode disposed at the exterior of said insulator,

filling said pressure-proof chamber with air under a pressure which is higher than atmospheric pressure,

establishing a potential difference between said first electrode and second electrode, and measuring a level of leakage current which flows between said first and second electrodes, and

judging whether said leakage current exceeds a predetermined value, to thereby judge whether or not said insulator is defective,

wherein said pressure-proof chamber is filled with dry air under said high pressure, having a dew point which is lower than a predetermined value.

8. (New) A method of inspecting an insulator to detect defects, said insulator having an aperture formed therein, the method comprising:

placing the entire insulator inside a pressure-proof chamber, with a first electrode disposed within said aperture of said insulator and with a second electrode disposed at and spaced apart from the exterior of said insulator,

filling said pressure-proof chamber with air under a pressure which is higher than atmospheric pressure,

establishing a potential difference between said first electrode and second electrode, and measuring a level of leakage current which flows between said first and second electrodes, and

judging whether said leakage current exceeds a predetermined value, to thereby judge whether or not said insulator is defective.